

pair will be substantially the same as that described in the FIGURE 2 circuit. However, to provide the lock-out operation, impedance 70 and the circuit parameters are selected so that only one pair can be in the ON state at any one time and a previously activated pair will be put in an OFF state by subsequently activating a second pair. This mode of operation is dependent upon voltage source 61 and the impedance 70 having values such that there is only sufficient voltage available to maintain one pair in the ON state. For example, when the resistance of impedance 70 is equal to the resistance of an electroluminescent-photoconductor pair, the voltage appearing across the pair is that corresponding to point H in FIGURE 3. If a second pair was activated to the ON state the voltage appearing across both pairs would tend to drop to approximately two thirds of the voltage at point H as represented in FIGURE 3. Under this circumstance neither pair could remain in the ON state. The result is that the electroluminescent-photoconductor pair which was first activated is returned to the OFF state, the second pair is then activated, and the desired lock-out function is performed.

FIGURE 7 illustrates a second embodiment of a bank of electroluminescent-photoconductor pairs which incorporates a lock-out operating feature. In a manner similar to FIGURE 6 and FIGURE 2, a voltage supply 71 is connected in series with an electroluminescent element 80 for performing the lock-out function. The bank of electroluminescent photoconductor pairs is comprised of the elements 72-1, 72-2 . . . 72-n and 78-1, 78-2 . . . 78-n corresponding respectively to the electroluminescent elements and photoconductors in FIGURE 6 and which are similarly connected and arranged. These pairs will also include switches corresponding to those in FIGURES 2 and 6, there being schematically illustrated only, switches 73-1, 73-2 and 73-n connected in parallel with photoconductors 78-1, 78-2 and 78-n, respectively. In addition to these, the electroluminescent element in each pair is provided with a photoconductor 79-1, 79-2 . . . 79-n, which is connected in parallel with the element and is arranged to receive light from the electroluminescent element 80 when any pair is activated to the ON state but (unlike switch 19 in FIGURE 2) it has sufficient impedance to permit substantial light radiation by the corresponding electroluminescent element. In a manner similar to the operation of FIGURE 6, this circuit is incapable of maintaining more than one pair in the ON state. This is because the photoconductors 79-1, etc. are selected so that there is insufficient voltage to maintain two pairs in the ON state. When the activating switch for a second pair is closed, there will be sufficient voltage to maintain its electroluminescent element in a light radiating state. The previously activated pair will be turned off and the lock-out function is performed.

While the fundamental novel features of the invention have been shown and described as applied to illustrative embodiments, it is to be understood that all modifications, substitutions and omissions obvious to one skilled in the art are intended to be within the spirit and scope of the invention as defined by the following claims.

What is claimed is:

1. An optoelectronic circuit construction comprising:
  - (a) an electroluminescent element including
  - (b) a first layer of nonconducting material, and
  - (c) a sandwiched arrangement of an electroluminescent phosphor layer disposed between and in electrical contact with a pair of conductive plane electrodes, said sandwiched arrangement overlaying said first layer,
  - (d) a touch sensitive switching element adapted to be electrically coupled to said electroluminescent element, including
  - (e) a second layer of nonconducting material, and
  - (f) a plurality of spaced apart conductive strips overlaying said second layer, said conductive strips ar-

ranged to be bridged by a digit surface so as to selectively provide a conductive path between said strips, said touch sensitive switching element being superimposed on and forming an integral unit with said electroluminescent element.

2. An optoelectronic circuit construction comprising:
  - (a) a nonconductive substrate,
  - (b) a sandwiched arrangement of an electroluminescent phosphor layer disposed between and in contact with a pair of conductive electrodes, said sandwiched arrangement overlaying said substrate,
  - (c) a layer of nonconducting material overlaying said sandwiched arrangement, and
  - (d) a pair of interdigital conductive strips adapted to be electrically coupled to the electrodes of said sandwiched arrangement formed on said layer of nonconducting material, said conductive strips arranged to be bridged by a digit surface so as to selectively provide a conductive path between said strips.
3. An optoelectronic circuit construction as in claim 2 wherein said layer of nonconducting material is transparent.

4. An optoelectronic circuit construction comprising:
  - (a) an electroluminescent element including
  - (b) a first layer of nonconducting material, and
  - (c) a sandwiched arrangement of an electroluminescent phosphor layer disposed between and in electrical contact with a pair of conductive plane electrodes, said sandwiched arrangement overlaying said first layer,
  - (d) a photoconductor element in radiation coupled relationship with said electroluminescent element including
  - (e) a second layer of nonconducting material,
  - (f) a pair of electrodes overlaying said second layer, and
  - (g) a layer of photoconductive material deposited on and in electrical contact with said pair of electrodes,
  - (h) a touch sensitive switching element adapted to be electrically coupled to said electroluminescent element including
  - (i) a third layer of nonconducting material, and
  - (j) a plurality of spaced apart conductive strips overlaying said third layer, said conductive strips arranged to be bridged by a digit surface so as to selectively provide a conductive path between said strips, said touch sensitive switching element, photoconductive element and electroluminescent element being superimposed upon one another and forming an integral unit.

5. An optoelectronic circuit construction including an array of electroluminescent elements, photoconductive elements and touch sensitive switching elements, comprising:

- (a) a nonconductive substrate,
- (b) a sandwiched arrangement of an electroluminescent phosphor layer in electrical contact with a plurality of conductive plane electrodes disposed on one side of said phosphor layer, each electrode adapted to be separately coupled to a source of voltage, and a common plane electrode disposed on the opposite side of said phosphor layer, said sandwiched arrangement overlaying said substrate and forming a plurality of electroluminescent elements,
- (c) a layer of nonconducting material overlaying said sandwiched arrangement,
- (d) a plurality of pairs of electrodes overlaying said layer of nonconducting material,
- (e) a layer of photoconductive material deposited on and in electrical contact with said electrodes so as to provide a plurality of photoconductive elements adapted to be in a radiation coupled relationship with said electroluminescent elements,
- (f) a second layer of nonconducting material overlaying said photoconductive material, and